

# Calculating Luggage Volume

You may want to consider how much volume your luggage holds when you travel. If you know how to calculate the area of a rectangular prism, you can also find the approximate volume of a suitcase. Below are the measurements of some common suitcase sizes.



- ① a. Find the volume of each suitcase.  
 b. Find the approximate volume of the interiors.  
 Round to the nearest 0.01 in.<sup>3</sup>.

### Suitcase 1

Exterior: 17" × 15" × 8"

a. Volume: \_\_\_\_\_

Interior: 16" × 13.75" × 6.5"

b. Volume: \_\_\_\_\_

### Suitcase 2

Exterior: 21" × 14" × 7"

a. Volume: \_\_\_\_\_

Interior: 19.5" × 13" × 5.75"

b. Volume: \_\_\_\_\_

### Suitcase 3

Exterior: 24" × 16" × 9.75"

a. Volume: \_\_\_\_\_

Interior: 22.5" × 14.75" × 8.25"

b. Volume: \_\_\_\_\_

### Suitcase 4

Exterior: 28" × 19" × 9"

a. Volume: \_\_\_\_\_

Interior: 26" × 17.5" × 7.5"

b. Volume: \_\_\_\_\_

- ② Describe how you can estimate the interior volume of a suitcase if you know the exterior measurements.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Practice Evaluate.

③  $\frac{2}{3} \div \frac{1}{6} =$  \_\_\_\_\_

④  $\frac{5}{12} \div \frac{7}{12} =$  \_\_\_\_\_

⑤ \_\_\_\_\_  $= 2\frac{2}{3} \div \frac{1}{2}$

⑥  $8 \div 2\frac{2}{3} =$  \_\_\_\_\_